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BY THE U.S. GENERAL ACCOUNTING OFFICE

# Report To The Secretary Of The Interior

# Simplifying The Federal Coal Management Program

COMPLETED

ORIGINAL

Development of coal under Federal leases and pending lease applications could be speeded up--and the administrative burden on the Department of the Interior reduced--by simplifying many of the procedures for administering the leases and processing the lease applications.

GAO makes several recommendations to the Secretary of the Interior aimed at recognizing

--the limitations that "real world" economic and geologic factors place on lessee ability to comply with existing procedures,

--similar difficulties for the agency in administering the regulations, and

--opportunities to generally simplify and streamline present lease administration processes.

EMD-81-109
AUGUST 20, 1981

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

Y AND MINERALS
DIVISION

B-169124

The Honorable James G. Watt
Secretary of the Interior

Dear Mr. Secretary:

Subject: Simplifying the Federal Coal Management Program (EMD-81-109)

As you may know, we have been reviewing the Department's regulations for the management of existing Federal coal leases and preference right lease applications (PRLAs). We had planned to complete our work later this year. The objective of this assignment was to identify regulatory modifications that could simplify and ultimately enhance the timely and orderly development of coal on existing coal leases and PRLAs. Because the Department has recently initiated a study of these regulations, including many of the same elements we were examining, we decided to defer further work and share with you some of our preliminary concerns so they may be considered during the Department's current efforts.

Our work was devoted primarily to the regulations affecting Federal coal leases and lease rights issued prior to enactment of the Federal Coal Leasing Amendments Act in August 1976. However, because of similarities between these regulations and the regulations governing leases issued since that time, our observations have equal applicability to new leases.

The subjects of principal concern to us are

--difficulties in implementing requirements for maximum economic recovery (MER),

--the regulatory requirements for diligent development,

--the designation of leases as logical mining units (LMUs),

--duplication of effort in environmental review of coal mine plans, and

--the lack of data needed to meet regulatory requirements for processing PRLAs.

These are briefly summarized below and discussed in more detail in the appendix.

## MER REGULATIONS NEED TO BE SIMPLIFIED

Our work suggests that the existing and proposed regulations on MER are unnecessarily burdensome to those involved and difficult if not impossible to administer. We believe the principal objectives of the law leading to the MER concept may be achievable in large part through the mine plan review and monitoring process. In addition, we noted that MER may not be realized in those circumstances where coal lies just outside the lease tract.

The primary objective of the MER concept is to prevent the avoidable waste of coal. Prior to being legislatively mandated by the Federal Coal Leasing Amendments Act (FCLAA) of 1976, Interior attempted to achieve the objectives of the concept through the review and approval of mine plans. The FCLAA provides that no mine plan can be approved that does not achieve MER, but it does not appear feasible to precisely calculate MER until after mining has begun. We believe you may want to examine whether the legislative requirement for MER can be satisfactorily met through the mine plan process by modifying the MER definition or, alternatively, whether some legislative relief is needed to avoid the present uncertainty. You may also want to explore possible situations in which producible quantities of coal are not mined because they lie off the lease tract.

## FLEXIBILITY IS NEEDED IN THE APPLICATION OF DILIGENCE REQUIREMENTS TO PRE-1976 LEASES

The Interior Department has issued certain regulations since 1976 directed at achieving more diligent development of existing Federal coal leases. Our preliminary work suggests that these regulations lack the flexibility needed to take into account all the factors affecting timely development of these leases, and could result in either forcing development of certain leases before market demand materializes or forcing their cancellation just about the time demand materializes. This rigidity stems from equating diligence with the production of stated quantities of coal by given dates.

We have recommended on several occasions that diligence criteria be sufficiently flexible to allow Interior to make sound judgments on lease cancellations. We continue to believe this is necessary.

## DESIGNATION OF PRE-1976 LEASES AS LMUs NEEDS TO BE CLARIFIED

Since May 1976, Interior has been attempting to designate all pre-1976 leases as LMUs, apparently as a means to simplify enforcement of diligence requirements on these leases. However, many of these leases do not appear to qualify as LMUs, and it is questionable whether Interior has a legal basis for even making such a designation.

The problem has gone unresolved for 5 years, and we believe it is time for the issue to be settled. We understand that the Interior Solicitor has now determined that pre-1976 leases are not LMUs. We would suggest that this position be made known to the public as soon as practicable.

## DUPLICATE ENVIRONMENTAL REVIEWS

Our work suggests that the coal mining and reclamation plan (mine plan) review process as implemented by the Office of Surface Mining Reclamation and Enforcement (OSM) causes duplicative environmental reviews. In some instances both the OSM and a State will review mine plans and prepare environmental decision documents. The environmental review process is costly, staff intensive, and time consuming. Any unnecessary duplication of effort by OSM and State agencies should be eliminated. In light of both the potential for regulatory streamlining and possible budgetary savings in this area, we believe you should consider possible ways, several of which are discussed in the appendix, to eliminate costly and time consuming duplication in the environmental review process.

## PRLA PROCESSING COULD BE ENHANCED WITH SIMPLER, MORE REALISTIC DATA REQUIREMENTS

About 170 preference right lease applications (PRLAs) for Federal coal leases have been awaiting adjudication by the Bureau of Land Management for up to 15 years. The processing of these could be expedited by waiving the application of new and stringent regulations that were not in effect at the time the prospecting was done and the lease applications submitted.

These regulations require economic and environmental data that neither Interior nor the applicant seem capable of developing, thus rendering any attempted compliance with them relatively meaningless, if not impossible. Furthermore, it is largely data that is probably not needed at such an early stage of development. On regular leases this type of data is not required until 3 years after the lease is issued, which appears to make the PRLA require-

ments premature as well as redundant to the normal lease development process. These regulations could probably be relaxed to expedite processing without jeopardizing the environment or timely development. The leases could be processed much more expeditiously and at the same time reduce the administrative burden on Interior and the applicants.

RECOMMENDATIONS

Based on the above observations, we recommend that you

--clarify the definition of maximum economic recovery and its implementing regulation with a view toward simplifying its administration, or as an alternative, seek legislative relief from the requirement that no mine plan be approved that does not achieve MER.

--evaluate the possibility of relaxing existing diligence requirements, to acknowledge circumstances when market conditions or other factors make strict compliance with existing regulations impractical,

--base LMU designations on definitive criteria rather than arbitrarily designating all existing leases as LMU's,

--modify present procedures for processing preference right lease applications to eliminate requirements for data that many applicants seem incapable of developing and which appear not to be needed at such an early stage of mine development, and

--consider ways of eliminating costly and time consuming duplication in the environmental review process, including the possible need for seeking legislative change.

More details and other suggestions are contained in the appendix to this letter.

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As you know, section 236 of the legislative Reorganization Act of 1970 requires the head of the Federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the four committees mentioned above and to the Chairmen of the energy-related congressional committees. We are also sending copies to the Director, Office of Management and Budget.

We discussed matters presented in this report with Interior officials and their comments have been incorporated into this report as appropriate.

We plan to reassess the issues discussed in this letter at an appropriate time after your study and regulatory proposals have been completed. We appreciate the courtesy and cooperation extended to our staff during the review and would appreciate being informed of any actions you take as a result of our observations and suggestions.

Sincerely yours,

J. Dexter Peach
Director

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# SIMPLIFYING THE FEDERAL COAL MANAGEMENT PROGRAM

## MER REGULATIONS NEED TO BE SIMPLIFIED

Maximum economic recovery (MER) is the concept of assuring that all economically recoverable coal is mined. Not only is it very important to the development of Federal coal, but also to such aspects of the process as the formation of mining units, mine plan approvals, and the determination of production quantities needed to meet diligence requirements. Under the Federal Coal Leasing Amendments Act of 1976 (FCLAA), no mine plan can be approved that does not achieve MER. In spite of this importance, almost 5 years after the concept was introduced, many problems still exist with its implementation. Specifically, it appears that

--a workable definition of MER has not been achieved;

--the regulations for calculating MER necessitate excessively detailed data submissions and analyses that apparently cannot be complied with prior to commencement of mining;

--the coal mine plan approval and monitoring process can achieve much of the purpose of MER;

--the concept of MER may not be achieved in those cases where bypasses occur.

We believe there is a need for prompt resolution of the MER definition and administration problems as discussed below.

### Principal objectives of MER

A review of the legislative history of FCLAA shows that the basic intent behind the MER requirements is to prevent mining only the most profitable portion of coal tracts, to maximize recovery while minimizing environmental damage, and to provide specific authority to Interior for the formation of mining units to aid in this objective.

The concept of MER was introduced by FCLAA which required that prior to issuing coal leases the Secretary would determine which mining method(s) would achieve the MER of the coal and that, after leasing, no mining plan for Federal coal would be approved which did not achieve MER. The act did not define MER nor were indications provided as to how it was to be

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determined. According to Interior's Assistant Solicitor for Onshore Minerals, the act left to the discretion of the Secretary the development of MER definitions and implementing procedures. The determination of MER is the responsibility of Interior's Geological Survey (GS).

MER definition is unclear

The existing regulatory definition of MER and the proposed regulations for its determination are not clear. In our 1979 "Coal Issues" report 1/ we recommended that Interior publish explicit maximum economic recovery regulations. We also stated that we believe it is essential for industry as well as Interior to know exactly what the rules and criteria are for making this determination.

In July 1979, the following current definition of MER was published:

> "'MER' means that all portions of the coal deposits within the lease tract shall be mined that have a private incremental cost of recovery (including reclamation, safety and opportunity costs) less than or equal to the market value of the coal."

In May 1980, proposed regulations for MER data submissions were published, but they have not yet been finalized.

Today, some uncertainty still exists regarding the current MER definition and regulations. As recently as January 1981, the GS Deputy Conservation Division Chief for Onshore Regulation developed a MER discussion paper which stated:

> "One reason for this discussion on MER is that there is a need to solicit field comment on defining exactly what MER is and how it is to be applied." (Underscoring provided.)

Examination of Interior documents suggests that such terms as private incremental costs and opportunity costs are still unresolved, and how much data lessees must submit to calculate MER is still uncertain. We believe Interior may want to examine whether these definitional problems could be cleared up by a thorough explanation in the regulations and a more simplified definition and application.

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1/"Issues Facing the Future of Federal Coal Leasing," EMD-79-47, June 25, 1979.

Otherwise, Interior may want to seek legislative relief from the provisions of the FCLAA that require the achievement of MER prior to mine plan approval.

In addition to the definitional problem, an overly sophisticated and precise analysis of MER may also be questionable (and perhaps unwarranted) because

--MER cannot be precisely calculated and is constantly changing and

--conservation and avoidance of coal wastage are largely assured through the GS technical review of the mine plans.

These problems are addressed below.

MER data requirements may be overly detailed

The amount of coal that can be economically recovered--and thus, the calculation of MER--is directly related to many imprecise and/or constantly changing factors. These include the (1) complexity of the geological conditions in which the coal deposit exists and the imprecise knowledge regarding these conditions until mining commences, (2) state-of-the-art in mining technology and the technology available for use by a given lessee, (3) coal industry economic climate in general and the competitive level of coal prices and mining costs in relation to a particular mining operation, and 4) the effect of transportation rates on the demand for coal. As a result, MER will always be based on approximations, and will be constantly changing.

MER cannot be precisely determined

MER determinations for mine plan approval cannot be precisely calculated because they are based on geologic estimates of only general reliability. Coal reserve estimation is not an exact science, and even under the best conditions the estimate of coal reserves considered recoverable from a given tract could be off by as much as 20 percent. The quantity of geologic evidence generally available for reserve estimation is insufficient to reduce this margin of error. Obviously, as mining progresses and more geologic data is acquired, the reserve estimate becomes more accurate. However, the actual coal reserve quantity will not be known until mining is completed--much too late to be of value for MER purposes.

By definition, coal reserves are that portion of the coal resource base which can be economically mined at the time the determination is made (i.e., using current technology). The

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estimate of coal reserves considers the general economics of the mining area, type of mining, coal quality and other physical factors. A detailed refinement of this economic data will not greatly change the margin of error associated with the geologic data and the MER coal tonnage figures will thus still be subject to errors of up to 20 percent.

MER will be constantly changing

Because the factors affecting MER, i.e., geologic knowledge, mining technology, and economics, change over time, so does the MER figure itself. The precision of any calculation may be affected by unforeseen geologic complexities encountered during the 40-year life of a mine that could change the reserves originally estimated to be minable and change the cost of mining. Likewise, changes in technology and economic conditions could affect the cost of mining and recovery rates.

The mine plan approval process can achieve much of the MER objective

Based on our preliminary review, we believe that GS makes a concerted effort to prevent avoidable coal waste through its mine plan review process, and may be able to achieve much of the objective of MER through this process. In actual practice, this is the way GS is now assuring itself of MER. Interior has stated that they believe the mine plan review process meets the legal requirements of MER.

We were told that prior to the introduction of MER by FCLAA, GS assured itself that this concept was achieved through review and approval of mine plans and by supervision and periodic inspections of actual mining operations. The adequacy of the mining plans was determined by evaluating such factors as: method of mining, coal thickness and quality, overburden and interburden, access to the coal, mine equipment and costs of mining, transportation, and value of the coal. Often mine plans were modified to change the total quantity of coal to be mined, and after operations commenced, further changes were frequently necessary to assure that coal was not wasted.

We reviewed the MER portion of GS's technical adequacy review of mine plans and mine plan modifications, to determine how GS was assuring the prevention of avoidable waste. For pre-lease assessments, we found that the MER determination consisted basically of a description of the coal resources, the method of mining, and an estimate of the recoverable reserves. Post-lease MER determinations consisted of geologic and engineering assessments of the operator's mine plan, together with recommended stipulations to

the mine plan and orders to operators. OSM's review and approval of the mine plan include assuring the mining of all coal practicable to avoid later redisturbing the mined lands.

The cases we reviewed contained a variety of coal recovery situations. In some cases, GS achieved a greater recovery and in others it did not. But the cases do demonstrate GS's ability to pursue the objectives of MER through the mine plan process. The pertinent details from some of these are highlighted below.

--In one case a coal operator attempted to close down part of a mine due to a fire. GS disapproved this request and with the concurrence of the appropriate safety agency recommended a means for stopping the fire and extracting additional coal.

--In several cases, GS, in cooperation with the safety agencies, developed improved methods and sequencing of mining, and required operators to use them. This resulted in operators extracting greater portions of mine support areas as their mining retreated.

--In another case, GS relaxed its requirement for the mining of additional coal upon a recommendation by the State. After consulting with various agencies, the State concluded that the coal was not marketable under State law.

--In a similar case the insistence of GS that the operator mine intermittent pockets of coal separate from the main stream led to over 2 years of correspondence, meetings, and additional data submissions. This issue was finally resolved upon a showing that the coal in question was of too poor a quality to be marketable. In this same case GS prohibited the auger mining of coal underlying a wildlife buffer zone because the recovery rate of the proposed mining method would be too low and any future mining would be impractical. After several years of negotiations, the buffer zone was removed and the mining of the coal by high recovery surface methods was approved.

In all of these cases the coal tonnage figures were determined on the basis of the geologic and engineering factors involved. However, resolution of these cases did not require extensive cost data nor sophisticated economic analyses.

Coal bypasses impede the achievement of MER

For a variety of valid reasons, not all coal is economical or even possible to mine; some may be commingled with spoils, left in mine support areas, left near geologic faults, or buried by overburden or other materials. But, in spite of the sophisticated and detailed approach to MER, not all economically producible coal may be mined either, because of bypass situations, i.e., leaving a seam or seams either above or below the seam to be mined, or leaving coal which extends beyond the lease boundary (fringe coal).

Prior to the enactment of FCLAA Interior frequently required operators to mine coal outside the lease boundaries to prevent waste. However, under FCLAA, the modification process starts at the initiation of the lessee and GS apparently does not have the authority to require the mining of coal in fringe areas. Furthermore, the modification process requires the consent of several other agencies such as the Bureau of Land Management. Normal processing of a lease modification can take longer than 6 months with the potential of the bypass occurring before the action can be completed.

We reviewed a recent modification to a lease which was initiated by the lessee to prevent the bypass of coal previously thought to have been burned. Through special efforts of GS and the Bureau of Land Management, and by short-cutting normal procedures, approval of this modification was completed in 3 months. While this modification was approved in time to allow the operator to continue mining and therefore not bypass the coal, this was possible in large measure because the operator slowed down his rate of mining and GS approved the mining of a small amount of coal near the lease boundary, in anticipation of approval of the modification. According to a GS official, had another month elapsed, the operator would probably have had to bypass this coal. This situation indicates that an expedited means for processing bypass modifications may be needed.

The fact that initiation of a modification rests with the lessee, in conjunction with the time required to process a modification, may result in bypass situations. GS officials told us that several lessees would not apply for bypass modifications because of the time and effort required. As we reported in August 1979 1/, nine bypass situations had occurred since May 1976 and others could occur if they were not processed in a

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1/"Answers to the 16 questions from the Chairman, Subcommittee on Mines and Mining, House of Representatives, concerning the Federal Coal Management Program," August 16, 1979.

timely manner. According to GS officials, no other bypasses have occurred since August 1979, but the potential for further bypasses is quite large.

A cursory review of a lease map for the Gillette, Wyoming, area showed a significant number of potential bypass situations. The coal outcrop line in this area is almost without exception outside the various lease boundaries. Further review of this area by GS showed at least 24 potential bypass coal tracts which ranged from 5 to 960 acres and comprised a total area of about 4,400 acres. A similar preliminary assessment by GS for a Colorado area identified 14 potential bypass tracts of 40 to 640 acres totaling over 5,000 acres.

## Conclusions and recommendations

We believe that regulations requiring detailed, sophisticated calculations of MER based on estimates of geologic data are overly burdensome and may be impractical, particularly since the primary objective of MER appears to be achievable through the mine plan approval and monitoring process. Interior's approach to implementation of MER will result in estimates of only general reliability which will have to be frequently redetermined.

Accordingly, we recommend that you redefine MER and examine the implementing regulations with a view toward keeping the regulations and their administration as simple as possible. Care should be exercised in clearly defining and explaining terms used in the regulations which are new or not widely understood and accepted. We believe the mine plan review process may be able to achieve much of the objectives of MER. Should it be found that a workable definition of MER compatible with pre-development circumstances cannot be devised, you may want to consider seeking legislative relief from the requirement that no mine plan be approved that does not achieve MER. Furthermore, we believe it is necessary for Interior to give priority attention to the potential waste of coal resulting from bypass situations.

## FLEXIBILITY IS NEEDED IN THE APPLICATION OF DILIGENCE REQUIREMENTS TO PRE-1976 LEASES

The Interior Department has issued certain regulations since 1976 directed at achieving more diligent development of Federal coal leases. Our preliminary work suggests that these regulations lack the flexibility needed to take into account all the factors affecting timely development of the leases, and could result in forcing development of certain leases before market demand materializes or, forcing their cancellation just about the time demand materializes. This rigidity stems from basing diligence on the production of stated quantities of coal by given dates. According to Interior, 1/ leases which contain as much as 36 percent of the coal reserves of all pre-1976 leases will probably not be able to meet the diligence requirements.

As we stated in our report on Coal Issues and reiterated in our report on Streamlining Mineral Leasing, 2/

> "A factor that should be considered in evaluating diligent development criteria is whether they are sufficiently flexible to allow Interior to make sound judgments as to which leases should and should not be canceled. A main objective of the criteria should be to establish a balance between timely and orderly production of coal consistent with market needs and avoid premature cancellation of leases."

Alternatives to the existing diligence criteria were also suggested in our "Issues" report.

### Background

The production requirements levied on pre-1976 leases by Interior's May 1976 regulations consisted of two distinct parts

- --diligent development - achieving production of 2 1/2 percent of lease (or LMU) reserves within 10 years (by June 1986), and
- --continued operations - production at the rate of 1 percent or more a year thereafter, with provisions for unavoidable suspension of production.

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1/Final Environmental Impact Statement Federal Coal Management Program, Department of Interior, April 1979.

2/"Possible Ways to Streamline Existing Federal Energy Mineral Leasing Rules," EMD-81-44, January 21, 1981.

Failure to meet either of these requirements could result in lease termination.

Extensions are granted in certain cases, and Interior also has the authority to suspend the lease provisions and to waive certain requirements for good cause. However, these rigid diligence requirements fail to recognize the importance of the coal market, the long time and extensive preparatory activities needed to get undeveloped coal into production, and the diverse conditions surrounding the leases.

## Market factors could inhibit compliance with diligence requirements

We believe application of diligence requirements should probably include consideration of market factors. Demand is as important as supply in producing coal, yet Interior regulations specifically state that weak market factors are not valid reasons for extension of the diligence time frame. In addition to waiting for markets to materialize, the lessees' problems are further complicated by the long lead times needed to complete environmental analyses, obtain equipment, prepare mine plans, etc. Generally, firm markets cannot be established until coal delivery can be assured.

Failure to consider the market for coal probably contributed to the perceived excessive leasing prior to 1970 which led to the current dilemma. However, conditions are changing, and a second failure to consider the market for coal in leasing considerations will not guarantee production. Interior's own new coal leasing program indicates that a need for increased coal availability exists. It seems incongruous that on the one hand Interior is issuing new leases (a long process in itself), and on the other may be taking steps that will terminate existing leases that might have potential to be producing in the near future. Interior's coal policy officials told us that their objective is to cancel only those leases where production is unlikely and serious efforts to develop are not underway. They said they would work with developers who were making good faith efforts to produce, and if the lessees failed to meet the 1986 deadline or even the 2 1/2 percent production figure, no actions to terminate the leases would be taken. This is commendable, but is not reflected in the regulations and it would require extra administrative effort for both Interior and the lessees.

The diversity of lease situations also suggests a need for flexibility

Some of the lessees also may not be able to comply with diligence requirements because their leases

--are small and would require additional Federal leasing or acquisition of other coal rights to form economically viable mining units,

--are located far from transportation routes,

--are in areas with environmental problems,

--contain coal that is of poor quality and thus is not competitive with higher quality coal, and

--contain coal that is costly to mine and thus is not competitive with coal that is cheaper to mine.

Some of these lessees may not be able to produce in the foreseeable future under any circumstances, and cancellation of their leases might be appropriate. Other lessees might be able to produce if they could obtain additional leases. However, it is likely that many of the lessees will be unable to obtain additional leases needed in time to meet the diligence deadlines. This same situation is faced by leaseholders whose eventual production depends on additional coal resources covered by PRLAs which are not scheduled to be completely processed until December 1984. Thus, it appears that many leaseholders, even if serious about developing their leases by 1986 to meet diligence, would be stopped by the operation or inoperation of other Interior programs.

Possible need for change in FCLAA

There may also be a need for Interior to seek a change in FCLAA in order to implement more flexible diligence rules. While Interior has maintained that the pre-1976 diligence rules were promulgated under the authority of the Mineral Lands Leasing Act and generally not affected by FCLAA, more flexible diligence rules may be negated by the language of Section 3 of FCLAA which states in pertinent part:

"The Secretary shall not issue a lease or leases under the terms of this Act [Mineral Lands Leasing Act] to any [entity] ***where any such entity holds a lease or leases issued by the United States to

coal deposits and has held such lease or leases for a period of ten years when such entity is not*** producing coal from the lease deposits in commercial quantities. In computing the ten year period referred to in the preceding sentence, periods of time prior to the date of enactment of the Federal Coal Leasing Amendments Act of 1975 shall not be counted."

Our interpretation of this provision is that a lessee who is not producing from a pre-1976 coal lease by 1986 could receive no other mineral lease. This provision appears to us to be extremely strict for several reasons:

--The provision as written applies to all minerals covered by the Mineral Leasing Act. Thus, a coal lessee, engaged or interested in other minerals such as oil and gas, and who for good reasons cannot get his pre-1976 coal lease into production by 1986 would be barred from obtaining other mineral leases while holding such lease,

--there appear to be no exceptions to this provision for pre-1976 leases, including one for lessees who obtained 5-year extensions to their diligence deadline under the existing regulations,

--lessees who need additional Federal coal to form LMUs and who do not succeed in obtaining new leases in time to produce by 1986, face a dilemma;

  --they cannot develop (produce from) their leases until they get additional leases, and

  --they cannot get additional leases unless they produce by 1986.

This provision was probably motivated by the high level of concern about the heavy involvement of speculators in the coal leasing program. In addition to the reasons cited above as to why this provision may not be in the best interests of an orderly coal management program, Interior should consider the current ownership of leases in order to determine if this provision is needed to reduce speculator involvement. The Office of Technology Assessment's forthcoming report on coal production potential is reported to contain analyses of this subject for both leases and PRLAs.

We are aware that Interior has included diligence in its review of the Coal Management Program regulations. Preliminary study drafts indicate that consideration is being given to incorporating diligence requirements in pre-1976 leases at the time they are readjusted or when they are incorporated into LMU's with other leases. These drafts also propose that factors other than actual production (e.g., expenditures for development) may be considered as meeting diligence requirements.

## Conclusions and recommendations

We believe that Interior's diligence requirements may be so inflexible as to result in premature cancellation of existing leases that might otherwise be developed in a reasonably diligent manner. We therefore recommend that you consider incorporating in Interior regulations provisions providing for relaxation of the diligence requirements when market conditions or other factors beyond the lessees control make strict compliance with existing diligence requirements impractical. We believe that applying diligence regulations at the readjustment time or upon the formation of LMUs would provide for more orderly administration and development of these leases. To avoid the years of confusion and controversy that surrounded the existing regulations, we also believe that Interior should specifically and clearly define those activities which will constitute evidence of diligence. It would also be desirable to examine Section 3 of the FCLAA to see if its provisions are unnecessarily strict.

## DESIGNATION OF PRE-1976 LEASES AS LMUs NEEDS TO BE CLARIFIED

Since May 1976, Interior has been attempting to designate all pre-1976 leases as LMUs, apparently as a means to simplify enforcement of diligence requirements on these leases. However, many of these leases do not appear to qualify as LMUs, and it is questionable whether Interior has a legal basis for making such a designation.

The problem has gone unresolved for 5 years, and we believe it is time for the issue to be settled.

## Background

In May 1976, because of minimal coal production from Federal lands and concern over speculation in leasing, Interior issued regulations citing the authority of the Mineral Leasing Act, which designated all existing leases as LMUs, thereby requiring production of 2 1/2 percent of the coal reserves within 10 years (by

June 1986--with possible 5-year extensions in certain cases) and a minimum production of 1 percent per year thereafter. The FCLAA was subsequently enacted, providing among other things that leaseholder consent is required to include pre-1976 leases in LMUs. Although Interior revised its May 1976 regulations after the enactment of FCLAA in an attempt to make the regulations for pre-1976 leases consistent with the act, these revisions did not resolve the problems with LMUs and diligence because of continuing legal questions and the uncertain applicability of the definition of an LMU to some existing leases.

Some existing leases may not meet the LMU definition

An LMU is defined as

> "...an area of land in which the coal can be developed in an efficient, economical, and orderly manner as a unit with due regard to conservation of coal reserves and other resources. A logical mining unit may consist of one or more Federal leaseholds, and may include intervening or adjacent lands in which the United States does not own the coal resources, but all the lands in a logical mining unit must be under the effective control of a single operator, be able to be developed and operated as a single operation and be contiguous." (Underscoring provided.)

However, because of size, location, environmental problems, coal quality conditions, and other reasons, a great many of the pre-1976 leases apparently cannot conform to this definition. Interior estimates that over half the Federal coal leases standing alone would have insufficient reserves to economically supply high volume coal users such as electric utilities.

There is a particular problem with the contiguous requirement in the LMU definition. Contiguous is defined to mean that all lands included in an LMU must at least touch on one corner. However, areas exist where coal lands may not meet this definition for geologic, ownership, and other reasons. And for a variety of economic, environmental or other reasons such areas should be mined as a unit, but being non-contiguous, this would not be possible under existing laws and regulations. The definition of LMU, and contiguity in particular, should be flexible enough to permit the formation of truly "logical" mining units, considering geologic,

engineering, mining, economic, environmental, and other concerns. In our "Coal Issues" report 1/ we suggested that this contiguity requirement needed to be carefully analyzed.

## Uncertain legal status of pre-1976 leases

The designation of each Federal coal lease as an LMU and the FCLAA provision that pre-1976 leases "may be included with the consent of lessees in such logical mining unit, ..." have created an apparent conflict. This led not only the coal industry but also one of the principal congressional sponsors of FCLAA to contend that the regulations were illegal. Interior's stated reason for designating pre-1976 leases as LMUs was to simplify the language of the regulations by allowing diligence to apply to LMUs rather than leases. While this may have merit, and although the regulations were subsequently revised several times, this LMU designation was not changed and has been the source of continuing confusion, comment, and criticism for 5 years.

It is our understanding that as a result of Interior's current review of the coal program, Interior's Office of the Solicitor has now determined that pre-1976 leases are not LMUs. We believe this to be a step in the right direction for clearing the air on this subject and we think it would be advisable for Interior to make these interpretations available to the public.

## Conclusions and recommendations

The attempt to designate all existing leases as LMUs is undesirable, if not unworkable, in many cases, and is of questionable legality. We recommend you direct that existing leases be formed into LMUs based on definitive criteria that considers owner's consent, tract size, geology, etc., rather than on arbitrary and universal criteria.

## DUPLICATE ENVIRONMENTAL REVIEWS

Our preliminary work suggests that the mine plan review process as implemented by the Office of Surface Mining Reclamation and Enforcement (OSM) causes duplicative environmental reviews. In some instances both the OSM and a State will review mine plans and prepare environmental decision documents. The environmental

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1/ "Issues Facing the Future of Federal Coal Leasing," EMD-79-47, June 25, 1979.

review process is costly, staff intensive, and time consuming. Any unnecessary duplication of effort by OSM and States should be eliminated.

## Legislative background

Mine plans on Federal coal leases are reviewed under the environmental protection provisions of two laws having similar purposes. The National Environmental Policy Act (NEPA) was passed in 1970 to promote efforts to prevent damage to the environment. The Surface Mining Control and Reclamation Act (SMCRA) was passed in 1977 specifically to protect the environment from the adverse effects of surface coal mining. Besides purpose, there are additional similarities between NEPA and SMCRA and their implementing regulations. Both have public awareness provisions, provide for public hearings or public meetings, and provide for obtaining comments from affected Federal, State, and local government agencies as well as the public.

### NEPA requirements

OSM, in its regulations implementing NEPA, requires that an environmental assessment (EA) be prepared on each mine plan covering Federal coal leases. An EA is prepared to determine whether a proposed action will likely have significant environmental impacts. If the proposed action may or will result in significant impacts, an environmental impact statement (EIS) is prepared to assess the impacts.

### SMCRA requirements

SMCRA also provides environmental protection through specific environmental protection performance standards which must be met before a mine plan can be approved. SMCRA requires that mine reclamation plans contain information on the existing environment, direct impacts of mining, some indirect impacts, and mitigative measures. This environmental impact information is taken from the mine plan and incorporated into a Technical and Environmental Assessment (TEA). In addition to meeting SMCRA requirements, the TEA was also intentionally designed to serve as input to the EAs and EISs prepared under NEPA.

## Mine plan environmental review on Federal lands appears duplicative

OSM has primary responsibility for regulation of surface coal mining on Federal lands, but this responsibility can be delegated to States through cooperative agreements. The basic purpose of a cooperative agreement is to eliminate State and Federal duplication

of regulatory control. All six major Federal coal States either have or are in the process of signing cooperative agreements with Interior. If there is a cooperative agreement, the State reviews the mine plan and prepares the TEA; if not, OSM does it.

However, even though the TEA addresses both SMCRA and NEPA requirements, OSM will still do its environmental reviews of the mine plan and prepare an EIS when it believes impacts may be significant. Thus, the State reviews the mine plan and prepares a TEA. OSM also reviews the mine plan and prepares an EIS. While the EIS assesses only NEPA compliance, the TEA assesses both NEPA and SMCRA compliance.

OSM officials told us there was little if any difference between the EA portion of a TEA and an EIS in content and State officials we talked to all agreed that preparation of both documents was duplicative and unnecessary. Neither the State nor OSM develops new information on impacts during environmental evaluation; in both cases, this information is taken from the mine plan.

Other impacts of the current process

Besides being largely duplicative, preparation of an EIS in addition to a TEA is costly, staff intensive, and time consuming.

OSM in its fiscal year 1982 budget estimates the cost of preparing an EIS at $250,000. OSM plans on processing 13 EISs at a cost of about $1.75 million. This is in addition to the grant funds that the Federal Government will be paying States to review mine plans and prepare TEAs.

OSM budgets 5 staff years for preparation of one EIS. EIS preparation requires the efforts of staff members representing a variety of disciplines such as geology, engineering, fish and wildlife, ecology, and hydrology. These same disciplines would normally be represented on the State staffs that review mine plans and prepare the TEAs.

Preparation of an EIS more than doubles the mine plan approval time frame. The entire EIS process takes 12 months to implement. The first 6 months is devoted to preparation of a draft EIS containing environmental impact information similar to that in the TEA. The remaining 6 months is devoted to preparation of a final EIS. State programs in major Federal coal States allow from 1 to 5 months maximum for mine plan review and TEA preparation. Thus the preparation of an EIS adds 7 months or more to the review process.

We reviewed an EIS and a TEA on a coal mine in Wyoming. Total cost for mine plan review and environmental impact analyses was over $380,000, with $289,000 for the EIS alone. The TEA and the EIS contained essentially the same environmental impact information. (In this case, OSM prepared the TEA as well as the EIS because mine plan review took place prior to the signing of the cooperative agreement with Wyoming. Under the cooperative agreement now in effect, the State would prepare the TEA.)

OSM officials told us that an EIS was prepared on the Wyoming coal mine because the Regional EIS prepared by the Bureau of Land Management did not adequately discuss the cumulative socio-economic impacts of surface coal mining in the area nor did it adequately discuss alternatives to mining.

We think it is inappropriate for OSM to prepare site specific EISs on individual mine plans primarily to discuss cumulative impacts. Regional impact statements are prepared for this purpose and updated periodically. They provide a more efficient means for discussing the cumulative impacts of a number of surface mines in a geographic area. Also, we think it is inappropriate to discuss alternatives to mining during mine plan review. State agency officials told us this should be accomplished prior to leasing.

## Conclusions and recommendations

Our work suggests that unnecessary duplication exists in evaluating the environmental impacts of coal mine activities, resulting in increased costs and staff effort by reviewing agencies, and delays in mine plan approval. Accordingly, we recommend that your current analysis of coal leasing regulations include consideration of possible ways to eliminate costly and time consuming duplication in the environmental review process. Some of the alternatives that would eliminate duplication and overlap include

--having States prepare EISs,

--having applicants submit environmental impact information in EIS format as part of the mine plan package, and

--exempting the mine plan review process from preparation of an EIS.

The first alternative would be for States to prepare EISs as discussed under the provisions of section 102 (2) (D) of NEPA. OSM would retain responsibility for the scope, objectivity, and content of the EIS but the State would prepare the EIS just as it now prepares the EA during the mine plan review. This approach would eliminate the current overlap in State and OSM

efforts but would still delay mine plan approval because of the current long review process within Interior as well as public comment periods.

A second alternative would be for OSM to require that the applicant submit environmental impact information in EIS format as a part of the mine plan package. Thus the applicant would help cover the expense of preparation of the document. As with the first alternative, OSM would be responsible for the scope, objectivity, and content of the EIS. Thus OSM would probably have to coordinate with the applicant to assure development of adequate environmental data.

The last alternative would be for Interior to seek a legislative exemption from the preparation of EISs. This is not without precedent, as Congress has exempted the Environmental Protection Agency (EPA) from preparing EISs for all activities under the Clean Air Act. The exemption was made because actions under this statute are undertaken with sufficient safeguards to ensure performance of analyses functionally equivalent to NEPA's EIS requirements.

We believe that an analysis of actions under SMCRA by your office would show that the mine plan review provides, or, with minor modifications, could provide safeguards similar to the EIS. The mine plan review process, with preparation of a TEA by State agencies, provides essentially the same information to the decisionmaker as does an EIS. In addition, the process can be performed in a more timely manner and at a reduced cost to OSM both in staff usage and dollars. Thus, along with other alternatives discussed above, the Department should consider the desirability of requesting an amendment to SMCRA exempting OSM from EIS preparation.

## PRLA PROCESSING COULD BE ENHANCED WITH SIMPLER, MORE REALISTIC DATA REQUIREMENTS

About 170 preference right lease applications (PRLAs) for Federal coal leases have been awaiting adjudication by the Bureau of Land Management for up to 15 years. The processing of these could be expedited by relaxing the application of new and stringent regulations that were not in effect at the time the prospecting was done and the lease applications submitted. These regulations require economic and environmental data that neither Interior nor the applicant seem capable of developing, thus rendering any attempted compliance with them relatively meaningless, if not impossible. Furthermore, it is largely data that is probably not needed at such an early stage of development. On regular leases, in fact, this type of data is not required until 3 years after the lease is issued, which appears to make the PRLA requirements redundant to the normal lease development process as well as being premature. These regulations could probably be relaxed considerably to expedite processing the lease applications without jeopardizing the environment or timely development. The leases could be processed much more expeditiously and at the same time reduce the administrative burden on Interior and the applicants.

### Background

The outstanding PRLAs originated from prospecting permits which were issued under provisions of the Mineral Lands Leasing Act of 1920. These provisions were repealed by the FCLAA. Under the Mineral Lands Leasing Act, coal prospecting permits were issued by the Bureau of Land Management. The permittee could then file a PRLA, and upon a demonstration that commercial quantities of coal had been found, as verified by GS, a lease would be issued. In making its determination of commercial quantities, GS relied primarily on the physical character of the coal and its geologic environment as compared to other deposits known to be producible. To demonstrate commercial quantities to GS's satisfaction required very little exploration. Thus, the PRLAs contained minimal geologic data--at times only one hole was drilled for the entire lease tract applied for.

These procedures remained unchanged for almost 50 years. Then,

--in 1969, requirements for an environmental review were introduced into the regulations,

--in 1976, the term "commercial quantities" was redefined by regulation, and the procedures for presenting the evidence to demonstrate commercial quantities were changed; and

--in 1979, the regulations were again changed expanding the requirements for the environmental review.

Most of the PRLA's pre-date all of these changes.

The 1969 regulations required that BLM prepare a technical examination prior to the issuance of a lease to determine what environmental impacts might result from the proposed mining operations. The purpose of these new requirements was to establish lease terms and stipulations to mitigate any anticipated adverse environmental impacts.

In 1976, the Department changed the definition of commercial quantities and substantially altered the procedures for its determination. The new commercial quantities test was based on the criteria of profitability to the lessee, considering the physical character of the deposit, the terms and conditions of the lease, and expected prices and costs. The procedures for demonstrating commercial quantities required that an initial showing and a final showing be submitted by the applicant and evaluated by GS. The initial showing was to establish the quantity (demonstrated reserves) and quality of the coal deposit, to present a description of the proposed mining operations, and to describe the measures to be taken for reclamation and protection of the environment. The final showing required a comparison of estimated revenues and costs, including the costs of complying with applicable statutes, regulations, and lease terms.

Once more, in 1979, the Department changed the PRLA regulations. Consideration of environmental and reclamation costs was added as a part of the definition of commercial quantities. More significantly, requirements for preparing an environmental assessment report were added, substantially expanding the requirements for the environmental review contained in the earlier regulations. The environmental assessment is to include an evaluation of the direct and indirect potential impacts of the proposed operation, the potential for successful reclamation, and all reasonable alternatives to leasing.

The PRLA's are considered subject to all these requirements, even though they were instituted after the prospecting was completed and the PRLA submitted.

Insufficient data for environmental assessments

The Bureau of Land Management is unable to properly comply with the new environmental requirements to the point where their value is questionable. We contacted Bureau officials in three of the six major Federal coal States in which are located 140 of the

178 outstanding PRLAs. Officials in all three States told us that the level of data available for preparing environmental assessments on PRLAs is minimal. We were also told that the production and operations plans submitted by the applicants for this purpose are only conceptual and will probably be very different from the actual mine plans developed.

According to Bureau officials in Colorado, the lack of data on PRLAs makes it difficult to prepare adequate environmental assessments. For example, in preparing an environmental assessment (EA) on three PRLAs in Colorado, the applicants were asked by the Bureau to submit data not only beyond that which is required by regulation, but even beyond what is required by a regular lease prior to mine plan submission. The officials stated that the applicants submitted the information under protest in the interest of having their PRLAs processed in a timely manner. The type of information requested included

--a wide range of potential employment statistics,

--information on a variety of taxes; and

--information on the effects on government personnel, costs, and revenues.

We were told by Bureau officials that the District Office responsible for preparing the EA decided that this additional information was necessary, and advised the applicants that processing could not proceed until the information was received. It should be noted, however, that under a regular lease, a lessee would be issued the lease and then given 3 years to develop this type of data.

The situation was similar in Wyoming, where BLM State Office officials told us that to prepare EAs on PRLAs they either have to obtain additional information from the applicant or make assumptions about likely production and development plans. We were told that if the applicant did not submit the data the Bureau would make the necessary assumptions to avoid delays in their schedule for processing the PRLAs in the course of their normal land use planning efforts. Furthermore, even if additional data were requested, it would probably have to be based on conjecture by the applicant as additional data--whether exploration data or other--is not available.

Insufficient data for commercial quantities determination

The lack of data on PRLAs also makes it impractical to determine commercial quantities to the degree of accuracy required by current regulations. These regulations require that the initial showing for determining commercial quantities contain evidence of demonstrated reserves, even though a regular lease provides 3 years for the lessee to do drilling and take other necessary actions to develop this data, and to formulate a mine plan. The PRLA applicant, however, is in effect required to develop his mine plan before getting the lease and without the benefit of further drilling or exploration. We were told by GS officials that some PRLAs may have only very limited geologic data, e.g., one drill hole in the entire permit area or, at best, somewhat less than one drill hole per square mile, which in most cases is not sufficient to show demonstrated reserves. Unless demonstrated reserves are determined, the reliability of the proposed mine plan required by the regulations to determine mining methods, production rates, and to perform an economic evaluation is questionable. The need for the data at this stage of development is also questionable.

Geological Survey officials in Utah told us that on most PRLAs there is simply not enough data available to make an economic evaluation, which is essentially what is required in the final showing. We were told that even though one drill hole per square mile is usual, most PRLAs in Utah contain multiple beds of coal and complex geology and GS officials are not in agreement as to whether this is sufficient data to determine demonstrated reserves, and perform the necessary economic evaluations. Officials told us that although the GS geologists in Utah do make determinations of whether or not coal has been discovered in the PRLA area, they usually add a caveat that their findings do not estimate demonstrated reserves.

We were also told by a GS official in Utah that assumptions about marketability and transportation must be made if an economic evaluation is to be done according to regulations. However, there is no transportation network in southern Utah where many of the PRLAs in that State are located. Consequently, it is not certain where the market for that coal would be, how the coal will be transported to the markets, or how much the development of transportation will cost. Conceivably, if the cost of developing the necessary transportation were included in the economic evaluations, these PRLAs would not meet the commercial quantities test. GS officials told us that the rejection of the PRLAs in southern Utah on this basis would probably lead to a number of lawsuits.

Conclusions and recommendations

Both the environmental assessments and the commercial quantities showings required by regulation are of questionable reliability. The environmental assessments are based on production and operations plans that are conjectural at best, and subject to change. The economic analyses required for determining commercial quantities are based on insufficient geologic data and assumptions about future costs, including markets and transportation. These uncertainties along with their attendant administrative problems, bring into question the reasonableness, and even the need, for such stringent and detailed requirements for processing PRLAs. Accordingly, we recommend you revise the PRLA regulations to eliminate the inherent conflicts and to provide for a more expeditious means of administering and disposing of the outstanding PRLAs.

Among the alternatives you may wish to consider for alleviating the problems associated with the processing of PRLAs are:

--Allow the applicants to obtain the additional data needed to prepare more accurate and reliable production and operations plans. Although this alternative would solve some of the administrative problems, namely the lack of data, it would not satisfy the criteria of expediency because of the time needed to get data.

--Revise the current regulations and procedures for processing PRLAs to reduce the amount of time and work required and yet meet any legal requirements. This could include eliminating or reducing the level of detail required in the environmental assessments, and relaxing the requirements for the demonstration and evaluation of commercial quantities. Both ease of administration and expediency could probably be accomplished with this alternative.

We are aware that Interior has included the processing of PRLAs in its review of the Coal Management Program regulations, with the objective of reducing the processing requirements to a minimum within legal limits.

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